

App. No. 09/673555
Office Action Dated February 17, 2004
Amd. Dated August 17, 2004

REMARKS

Reconsideration is respectfully requested in view of the above amendments and following remarks. Claims 1, 42, 43, 61, 62 and 64 are amended. Claims 1, 62 and 64 have been amended editorially and to more clearly recite "and/or" and claim 1 has been further amended to delete "such as". Claims 42, 43 and 62 have been amended editorially. Claims 73-76 are new. Claim 73 tracks claim 64 and claims 74-76 recite "detection is a measurement" and depend on claims 62, 64 and 73 respectively. No new matter has been added. Claims 1-23, 28-31, 33-35, 42-64 and 69-76 are pending.

Claim rejections - 35 U.S.C. § 112

Claims 1-23, 28-31, 33-35, 42-64 and 69-71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Applicants respectfully traverse this rejection. Claims 1, 42, 43, 61, 62 and 64 have been amended. Applicants do not concede correctness to the rejection. Withdrawal of this rejection is respectfully requested.

Claim rejections - 35 U.S.C. § 102

Claims 1-23, 28-35, 42-64 and 69-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Benveniste et al. Applicants do not concede correctness of the rejection. Applicants respectfully traverse the rejection in view of the following.

Claim 1 teaches a process for amplifying a reaction between a ligand and a receptor of a ligand-receptor pair by producing or acquiring a signal from at least one of said ligand or said receptor, said signals produced from an electromagnetic signal picked up from a biologically active element, at least one of said ligand or said receptor. Where the produced electromagnetic signals transduced from said signals are applied to at least

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one of said ligand or receptor. Furthermore, said produced signals can be applied prior to, simultaneous with, or subsequent to said ligand and said receptor.

Benveniste discloses a method of digitally acquiring signals representative of a biologically active element from a solution containing the biologically active element, recorded at 1 sec, 16 bits and 22kHz. The digitized signals are transferred and replayed to water, in which the water is then given the biological activity corresponding to the molecular activity of the biologically active element. Benveniste also discloses that prior to the application of the signal to the water, an amplification of the signals representative of a biologically active element can be realized.

Benveniste uses four samples to check the transfer of the biological activity using the acquired signals, dW, dOva, W and Ova. dW is the reference for a solution of naive water that was submitted to a signal acquired from water alone (the solution does not contain any molecular Ovalbumin). dOva is the reference for a solution of naive water that was submitted to a signal acquired from a solution of Ovalbumin (the solution does not contain any molecular Ovalbumin). W is the reference for naive water. Ova is the reference for a solution containing molecular Ovalbumin.

Benveniste discloses that hearts from Ova-immunized guinea-pigs are perfused with the four solutions whose references were given above. The experiments enable to check the transfer of the molecular activity of the biologically active element. It is further noted that the guinea-pig hearts and Ova are never submitted to any produced signal, prior to, simultaneously to or subsequently to the perfusion. Further, Obvalbumin molecules are only submitted to an excitation signal, which by its interaction with Ova molecules allows recording the signals of the latter.

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Therefore, none of the four above listed solutions is a solution of a ligand or a receptor, to which was applied a produced signal representative of a biologically active element, at least one of said ligand or said receptor. Benveniste fails to teach or suggest submitting a solution including a ligand or a receptor to a signal produced from an electromagnetic signal picked up from said biologically active element, at least one of said ligand or said receptor. Furthermore, Benveniste fails to teach or suggest a method for amplifying a reaction between a ligand and a receptor. Benveniste further fails to teach or suggest applying produced electromagnetic signals transduced from said signals to at least one of said ligand or receptor, wherein said produced electromagnetic signals can be applied prior to, simultaneous with or subsequent to said ligand and said receptor being brought into contact. Thus, Benveniste does not anticipate claim 1. Withdrawal of the rejection is respectfully requested.

Claims 2-23 and 28-35 depend either directly or indirectly from claim 1. For the reasons discussed above for claim 1, withdrawal of the rejection is respectfully requested.

Claim 42 teaches a process for amplifying a reaction between a ligand and a receptor of a ligand-receptor pair by applying an electromagnetic signal, obtained from an electrical signal produced in front of at least one of said ligand or said receptor.

As discussed above for claim 1, Benveniste fails to teach or suggest applying an electromagnetic signal, obtained from an electrical signal produced by at least one of said ligand or receptor, to the reaction between a ligand and a receptor of a ligand-receptor pair. Thus, Benveniste does not anticipate claim 42.

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Claims 43-64 and 69-72 depend either directly or indirectly from claim 42. For the reasons discussed above for claim 42, withdrawal of the rejection is respectfully requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions or concerns regarding this communication can be directed to the undersigned attorney, John J. Gresens, Reg. No. 33,112, at (612)371.5265.

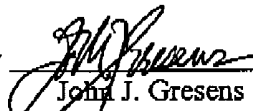
Respectfully submitted,

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Dated: August 17, 2004

By


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JJG:mmm